

Basic information:

Name: Lijun Li
Place of birth: Xiaogan, Hubei
Marital status: Married
Degree: PhD
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Data of birth: 1984/01/01
Healthy: Good
Language: CET6
Major: Condense Matter Physics

**Work Experience:**

1. Jul. 2012-Present: **Institute of Solid State Physics (ISSP) Chinese Academy of Science (CAS)**
Position: Assistant professor
Research field: New superconducting material research
Department: Key Laboratory of Materials Physics
2. Oct. 2012- March 2013: L-NESS of Politecnico di Milano
Position: Post doctor
Research field: Magnetoelectric coupling study and deposition of thin films by pulsed laser Deposition (PLD), molecular beam epitaxy (MBE) and magnetron sputtering methods. Micro-devices fabrication by optical lithography, magneto-optical characterization measurement of magnetic thin films.
Department: Physics Department

Education Background:

1. Sept. 2007-Jul. 2012: Institute of Solid State Physics (ISSP) Chinese Academy of Science (CAS)
Degree: PhD
Major: Condensed Matter Physics
Department: Key Laboratory of Materials Physics
2. Sept. 2003-Jul. 2007: Hubei University
Degree: Bachelor of Engineering
Major: Material Physics and Chemistry
Department: Department of Materials Physics and Chemistry

Honors:

1. Outstanding student, from 2003 to 2007, HBU
2. Outstanding student 2008-2009, ISSP

Research Background and Technical skills:

During PhD period, I was mainly working on single crystal growth and the transition metal intercalation/doping effects on the charge-density-wave (CDW) superconductor system transition metal dichalcogenides (TMDCs) MX_2 , where M is a

group 3-5d transition metals and $X = S, Se, \text{ or } Te$. Meanwhile I was in charge of two important instruments: the Superconducting Quantum Interference Device (SQUID) and the Physical Property Measurement System (PPMS). Because of these work experience, I gained more knowledge about Magnetic, Thermo, Electronic properties of inorganic materials, Low temperature physics and Single Crystal Growth techniques, and other Solid State Physics related areas.

I came to L-NESS center in Physics Department of Politecnico di Milano (Italy) at the beginning of October 2012 for a 6 months' post doc. I mainly study magnetoelectric coupling at the interface between ferromagnetic and ferroelectric materials, and learn the thin film growth techniques, such as Pulsed laser Deposition (PLD), molecular beam epitaxy (MBE) and magnetron sputtering. It enriches my knowledge about thin film growth and high vacuum fields. Thanks to the daily communication with foreign supervisor and colleagues, I improved my language skills very fast.

I believe that my diverse PhD research background and oversea study experience will be helpful to my future work in your group.

Publications:

- [1] Superconductivity of Ni-doping $2H-TaS_2$
L. J. Li *et al.*, *Physica C* **470** 313 (2010).
- [2] Growth and superconductivity of $2H-Ni_{0.02}TaSe_2$ single crystals
L. J. Li *et al.*, *Solid State Communication* **150** 2248 (2010).
- [3] Influence of the low Mn intercalation on magnetic and electronic properties of $2H-TaS_2$ single crystals
L. J. Li *et al.*, *Journal of Magnetism and Magnetic Materials* **323** 2536 (2011).
- [4] Fe-doping induced superconductivity in the charge-density wave system $1T-TaS_2$
L. J. Li *et al.*, *Europhysics Letters* **97** 67005(2012).
- [5] Effect of Fe-doping on charge density wave in $1T-TaS_2$: Instability and induced superconductivity
L. J. Li *et al.*, *Journal of Physics: Conference Series* **400** 022061 (2012).
- [6] Real-Space Coexistence of the Melted Mott State and Superconductivity in Fe-Substituted $1T-TaS_2$
A. Ran, L. J. Li *et al.*, *Physical Review Letters* **109** 176403 (2012).
- [7] Superconductivity induced by Se-doping in layered charge-density-wave system $1T-TaS_{2-x}Se_x$
Y. Liu, L. J. Li *et al.*, *Applied Physics Letters* **102** 192602 (2013).
- [8] Influence of defects on charge-density-wave and superconductivity in $1T-TaS_2$ and $2H-TaS_2$ systems
L. J. Li *et al.*, *Physica C* **492** 64 (2013).

Contact information of references:

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